

## ABSTRACT

A digital filter includes at least a first and a second delayed summation line. One of the delay lines includes a warped finite impulse response (FIR) filter and the other line is a FIR filter. Midpoint elements from the first delayed summation line are used as input to the second delayed summation line. Output from the first delayed summation line is delayed with a delay corresponding to the total delay of the second delayed summation line and the delayed output from the first delayed summation line is added to output from the second delayed summation line to form a new output.